Claims:

1. A method for producing a tubular drive shaft, in particular a cardan shaft for a motor vehicle, comprising a first section with a first diametre D and a second section with a second diametre d, said second diametre d being smaller than said first diametre D, and a transition section in which a diametre of said drive shaft diminishes from D to d and which is provided with an annular bead which coaxially surrounds a longitudinal axis of said drive shaft, and in the process of which method a tube with said first diametre D is reshaped and reduced in diametre to form said second section and said transition section,
characterized in that said bead is formed during, after, or during a break in said reshaping process that results in the production of said second section with said second diametre d.

2. The method according to claim 1, characterized in that said tube is reshaped by at least one of rotary swaging or drawing.

3. The method according to claim 1 or 2, characterized in that said bead is formed at an outer surface of said transition section.

4. The method according to claim 1 or 2, characterized in that said bead is formed at an inner surface of said transition section.

5. The method according to claim 1 or 2, characterized in, that a first bead is formed at an outer surface and a second bead is formed at an inner surface of said transition portion.

6. The method according to one of the preceding claims, characterized in, that said bead is formed such that it extends along a whole circumference of said transition portion without interruption.

7. The method according to one of claims 1 to 6, characterized in that said bead is formed, such that it extends along a circumference of said transition section with interruptions.

8. The method according to one of the preceding claims, characterized in that said bead is formed by a chip-removing technique, in particular by turning.

9. The method according to one of claims 1 to 7, characterized in that said bead is formed by chipless technique.

10. The method according to claim 9, characterized in that said bead is rolled into said transition portion.

11. The method according to claim 9, characterized in that said bead is pressed into said transition portion.

12. The method according to claim 9, characterized in that said bead is formed by rotary swaging.

13. The method according to one of the preceding claims, characterized in that said bead has a depth of 0,15 mm to 0,3 mm.

14. The method according to one of the preceding claims, characterized in that a force which acts upon said transition portion while forming said bead has a component parallel to a longitudinal axis of said drive shaft.

15. The method according to claim 14, characterized in that said component of said force which is parallel to said axis is larger than a radial component of said force.

16. The method according to claim 14, characterized in that said force acts only parallelly to said axis.

17. A method according to one of the preceding claims, characterized in that while forming said bead into said transition section, in particular while forming said bead by pressing, occuring forces are accomodated by a counter bearing which is temporarily put to said transition portion at its face opposite to said bead.

18. A tubular drive shaft, in particular a cardan shaft for a motor vehicle, comprising a first section with a first diametre D and a second section with a second diametre d, said second diametre d being smaller than said first diametre D, in addition to a transition section in which a diametre of said drive shaft diminishes from D to d and which is provided with an annular bead coaxially surrounding a longitudinal axis of said drive shaft, which is produced by a method according to one of the previous claims.